Oklahoma NextGen Project

Next Generation Networks Inc (NGN) is applying to build a fixed wireless WiMAX broadband last mile access network to connect 7 remote, unserved communities and 2 underserved communities in 3 Northeastern Oklahoma counties. According to US Census data the targeted service areas are rural. NGN is deploying advanced wireless beam forming antennas that enable higher throughput and customer services at lowest cost. NGN's management team has served in senior implementation and operational executive positions for the US Dept of Defense and leading domestic commercial communications providers, and is highly qualified to manage the Project implementation.

- Project targets rural, unserved and underserved population
- Project serves all critical community facilities
- Project delivers 2Mbs basic service
- Project achieves lowest competitive prices
- Project is cost effective – under $200 per person including cost of CPE
- Project delivers voice, video and data
- Project is sustainable
- Project is environmentally friendly
- Project uses all American products and technologies
- Project leverages grant funding
- Project is open source and open access
- Project is operational in 1 year
- Project is future proof
- Project quality assurance from ISO 9000 certified provider

The last mile project targets unserved and underserved rural communities as defined by the BIP application guide and which will serve as the core instantiation from which service may be extended incrementally by Next Generation Networks to surrounding areas as subscriber rolls grow. US census data indicates the targeted communities comprise 28,319 persons in 13,019 households while NAICS business code listings indicate no fewer than 150 small and medium sized community businesses in the service areas. These businesses represent the essential social, business and professional fabric of the communities that will be served and, with the exception of farming, virtually all-available employment opportunities. The network will also makes high speed Internet access available to all municipal, public safety, library and anchor institutions in the targeted communities at reduced rates and these institutions number no less than 25 end points.

Jobs, Education, Health & Social Services
The availability of Broadband services will stimulate business and professional activity and provide more, and a wider variety, of employment opportunities to include computer, technical and communications services.

The construction and deployment of the proposed system will create immediately at least 25 local jobs in engineering, construction, installation, supervision and administration and as many as 50 permanent long term jobs in systems operations, maintenance, sales and service as the system expands over the next 5 years.

Every network customer will have access to the resources of a backbone network to include the educational resources which are tailored for, and targeted to, Oklahoma's local communities. The access barriers to educational opportunities for jobs training, professional development, and career advancement will be, to a large extent, banished. The open educational access component to the proposed system can be expected to provide immediate as well as permanent stimulus for service, professional, consultative, technical, and entrepreneurial jobs opportunities in the proposed service areas.

The proposed network will provide bandwidth minimum of 1.2 Mbs per second downstream and 800 kilobits per second upstream. The Network will deliver Business level bandwidth as high as 10Mbs. The high available bandwidths will positively impact critical areas of Health, Education and Professional Services enabling distance learning and distance medicine. NAICS data indicates over 379 educational, health and social service workers in the unserved proposed service area, with 30 critical facilities, and 46 businesses. In the underserved communities of Miami and Commerce NAICS business census data indicates over 1,500 persons employed in education, health and social services, fully 25% of all employment.
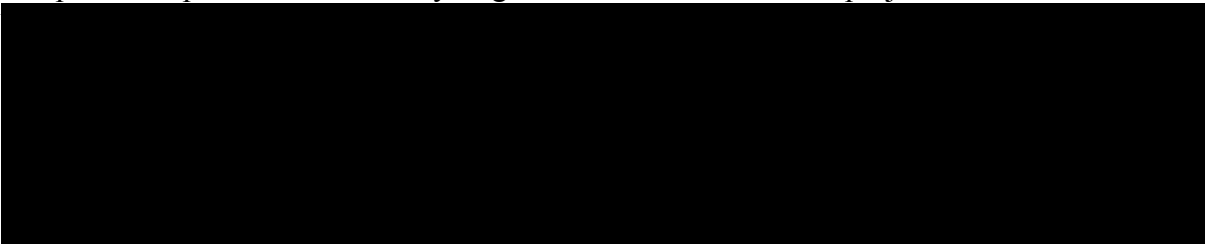
Service Deliverables

The WiMAX network deliverables will include: high speed and very high speed Internet access, streaming radio and video, email, voicemail, data transfer, internet telephony, and VPN. As the network scales future service enhancements can include mobile services, video telephony, e-learning, e-medicine, live entertainment; sensor technologies; vehicle tracking and logistics, and RFID.

The proposed network, from the perspective of bandwidth deliverables, is future proof. The network utilizes "passive" components that enable the system to utilize any existing, or future, standards based RF technologies. The proposed system will utilize beam forming, WiMAX standard components; and multi-tiered architecture to deliver converged voice, video and data services to local communities, using commercial off the shelf components. The network is standards based and an open access system. The network can accommodate the transport requests of any IP standards based provider.

Company Qualifications and Cost Effectiveness

The proposed system's inherent cost efficiencies are enhanced by the experience and technical expertise of the key contractors involved. Next Generation Networks Inc ("NGN") is a New York based network and wireless technology integrator. NGN's management has held senior positions in the U.S. military and leading commercial telecommunications companies responsible for delivery of global telecommunications projects.

Based upon the assessments that form the basis for this proposal the overall cost of the proposed network will be $4.8 million over the 9 month implementation period. The proposed system is projected to attract 4,000 subscribers initially and rise to 9,000 over five years. The system is engineered to accommodate an adoption rate of 100% of the population passed. Based upon the total population of the targeted service areas, the infrastructure cost of this network is less than $200 per person.

The financial pro-forma data supports the conclusion that the network will be sustainable indefinitely.